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An Update – Canadian Non-Energy Exports: Past Performance and Future Prospects

by André Binette, Daniel de Munnik and Julie Melanson

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Abstract

In light of the fact that Canada was continuing to lose market share in the United States, Binette, de Munnik and Gouin-Bonenfant (2014) studied 31 Canadian non-energy export (NEX) categories to assess their individual performance. From this list, about half were expected to lead the recovery in exports. Since that time, NEX growth has picked up: about 80 per cent of the 31 categories have grown in line with, or outperformed, their respective U.S. benchmarks. Furthermore, about half are currently showing upward momentum. Many export categories highly sensitive to the exchange rate have been a key source of strength, as they benefited from the further depreciation of the Canadian dollar. In addition, a more granular analysis finds that export product categories are emerging or re-emerging from low levels. On the downside, however, some categories closely linked to commodity prices have been affected by weak activity and lower prices.

JEL classification: F10, F14, F43
Bank classification: International topics; Balance of payments and components; Exchange rates

Résumé

Face au recul persistant des parts de marché du Canada aux États-Unis, Binette, de Munnik et Gouin-Bonenfant (2014) ont étudié l'évolution individuelle de 31 catégories de biens non énergétiques canadiens. Près de la moitié des biens examinés étaient appelés à tirer la reprise des exportations. Depuis, les exportations de biens non énergétiques se sont redressées : dans environ 8 cas sur 10, la croissance observée a été soit plus rapide que celle des variables de référence aux États-Unis, soit du même ordre. Par ailleurs, dans près de la moitié des catégories, la croissance est en train de s'accélérer. De nombreuses catégories de biens non énergétiques très sensibles aux mouvements de change sont à la base du regain constaté, car elles bénéficient de la dépréciation du dollar canadien. Une analyse plus fine révèle que des catégories de produits d'exportation commencent à enregistrer un certain élan ou renouent avec le dynamisme après avoir atteint des niveaux bas. À l'opposé, des catégories de produits sensibles à la fluctuation des prix des matières premières ont été pénalisées par la faiblesse de l'activité et des cours.

Classification JEL : F10, F14, F43
Classification de la Banque : Questions internationales; Balance des paiements et composantes; Taux d'intérêt

I. Introduction

Non-energy exports (NEX) are a key driver of the Canadian economy. To better understand their dynamic, Binette, de Munnik and Gouin-Bonenfant (2014) conducted detailed analysis of 31 NEX categories to assess both their past performance and to identify which export subaggregates were likely to be supported by the depreciation of the Canadian dollar.[1] Taken together with expectations for U.S. demand, this analysis was to gain insight into their future performance and hence the NEX recovery. About half of the NEX categories were labelled *as expected to lead the recovery* (leaders), including those likely to benefit from robust growth in U.S. construction, U.S. investment in machinery and equipment (M&E), and/or the recent depreciation of the Canadian dollar.[2] They also found that about half of the NEX subsectors appear to be quite sensitive to persistent movements in the exchange rate.

Since Binette, de Munnik and Gouin-Bonenfant (2014) published their analysis, six additional quarters of export data have shown that the NEX recovery has begun to take hold. This recovery has been supported by the depreciation of the Canadian dollar and key U.S. business investment segments, residential investment, and, to a lesser extent, industrial production, which have grown at a solid pace in recent quarters.[3] About 80 per cent of the NEX 31 categories have grown in line with, or outperformed, their respective U.S. benchmarks.[4] Recently, however, deteriorating commodity prices and the associated depreciation of the Canadian dollar have marked a key shift in the exporting environment and have already begun to impact the momentum of several export segments.

At a more granular level, analysis of over 4,000 export product codes has revealed that many export products are surging forward in areas that were previously in decline or were almost non-existent.[5] While these represent only a small proportion of total exports, hundreds of export products have grown by more than 10 per cent on a sustained basis in the years following the recession. Along with the overall upward trajectory of NEX since late 2013, these findings suggest

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[1] Canadian non-energy exports are divided into 34 major subaggregates in the 2012 System of National Accounts (SNA) produced by Statistics Canada. Thirty-one of these series were considered. We exclude transportation services (since it is believed to be largely driven by other export categories) as well as special transactions and other balance-of-payments adjustments (given that they are difficult to fit into this framework).

[2] This work considered each export category's recent performance, its link to the expected drivers of foreign demand, intelligence from industry contacts and historical sensitivity to the exchange rate to determine which export components were likely to lead the recovery. The authors also note that they used only U.S. benchmarks. With about 25 per cent of our products shipped to non-U.S. destinations in 2013, the benchmarks could be improved in the future. For two export categories (government and commercial services), the authors elected to use U.S. GDP.

[3] U.S. business investment, residential construction and industrial production have grown on average over the past six quarters by 4.6, 6.7 and 2.5 per cent (quarter-over-quarter at annualized rates), respectively. Note that in the first half of 2015, several temporary factors (including the harsh winter weather, the U.S. port strike and temporary shutdowns in the auto sector) likely played a role in holding back export growth. Therefore, we interpret the end of sample with caution.

[4] In terms of their 2014 nominal share, these categories represent two-thirds of NEX.

[5] Over 4,000 nominal (Harmonized Sales Code level 6) goods export product series were downloaded from Trade Data Online (Industry Canada) in mid-2015.

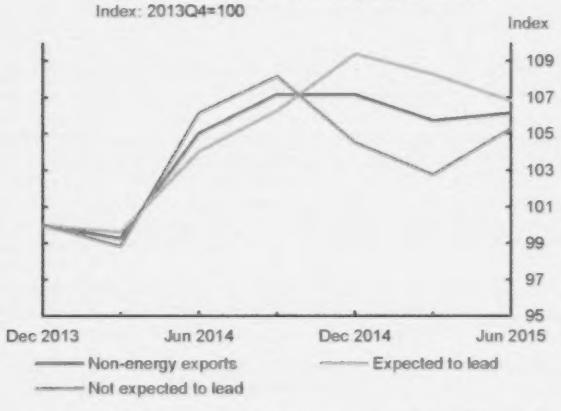
that the export recovery is taking hold and the Canadian export sector is showing some rebuild since the Great Recession.

Below, we outline our assessment of the recent developments and highlight some results of the granular look within the 31 non-energy export categories.

II. Recent behavior of NEX

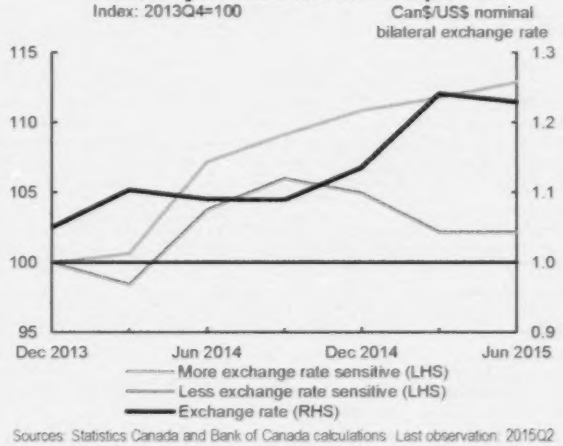
Since Binette, de Munnik and Gouin-Bonenfant (2014) published their analysis, NEX have posted a fairly widespread pickup across its subcomponents (Appendix A). The recent performance of many NEX subsectors was supported by solid U.S. private domestic demand and the Canadian-dollar depreciation against the U.S. dollar. The Canadian dollar had depreciated by about 10 per cent prior to early 2014, and has fallen by an additional 10 per cent by mid-2015. In the 2014 study, we identified that 17 of the 31 NEX categories showed a pattern of exchange rate sensitivity that was visible in the historical data.[6] Using monthly trade data as of August 2015, over two-thirds of the export categories sensitive to the exchange rate show momentum (Tables 1 and 2, and Appendix A). Note that travel and commercial services have not been labelled as being more sensitive to the exchange rate, because we did not observe a pattern of sensitivity over time. Yet, because costs are almost entirely denominated in Canadian dollars, we do expect travel and commercial services to benefit from the recent depreciation. While commercial services have been relatively flat (discussed further below), exports of travel services have already picked up meaningfully.

Chart 1: **Non-energy exports: expected to lead vs. not expected to lead the recovery since 2013Q4**



Sources: Statistics Canada and Bank of Canada calculations. Last observation: 2015Q2

Chart 2: **NEX sensitive to the exchange rate have been boosted by the Canadian dollar's depreciation**



Sources: Statistics Canada and Bank of Canada calculations. Last observation: 2015Q2

[6] If, during a period of depreciation (appreciation), the growth of a component surpasses (lags) the growth of the benchmark, we define this series to be responsive to exchange rate movements. Using this definition, if a component is responsive for at least three out of four cycles, then it is defined as sensitive to the exchange rate. The last four major exchange rate cycles are 1983–86, 1986–91, 1992–95 and 2002–07.

Further analysis at a more granular level supports the pervasiveness of the NEX pickup. Between 2010 and 2014, exports of more than 300 narrowly defined goods of the 4,000-plus export product series rose well beyond a cyclical recovery (Chart 3).[7] Virtually all these products expanded by at least 50 per cent over this period (twice the increase rate of the Bank of Canada's foreign activity measure; see Morel 2012). Most of these products belong to subsectors marked as leaders and/or more sensitive to the exchange rate, although about a third of these products are linked to the group not expected to lead the recovery (laggards) and are less exchange rate sensitive. These surging exports added more than $30 billion to Canadian NEX since the Great Recession, accounting for more than a quarter of the overall NEX recovery. Lumber and standard-sized passenger cars played an important role in this dynamic, but hundreds of smaller categories also contributed, highlighting the diversity behind the growth in overall NEX.[8]

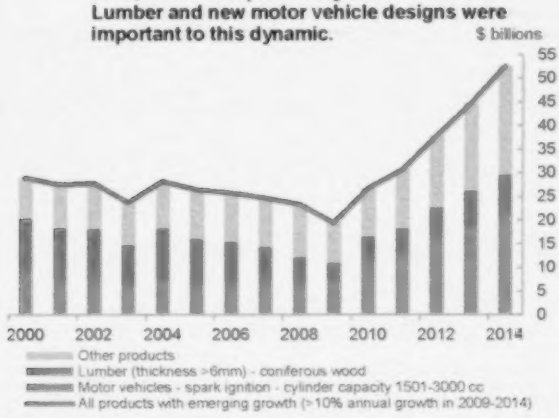
A different sorting of the 4,000-plus export product series also allowed us to identify emerging products.[9] More than 350 product categories appear to have emerged, at an average pace of about 90 product categories per year. About a third of the 350-plus products were more than 400 per cent above their 2009 levels. We observed that about two-thirds of the emerging products are actually re-emerging – these exports experienced level declines prior to 2006, but have begun to recover following the recession (Chart 4).

[7] Our investigation identified 323 *surging* export products that have grown by 10 per cent or higher for at least four of the previous five years since the Great Recession. Because very high growth is also often volatile, we allow for a year of growth of below 10 per cent in a single year over the period, but remove any series that fell back in 2014 by more than 50 per cent.

[8] Compared to 2007 values, almost 90 per cent of surging export products are higher in 2014. Lumber exports are one of the most notable exceptions, as well as some textile and consumer goods, which have begun to re-emerge after years of decline.

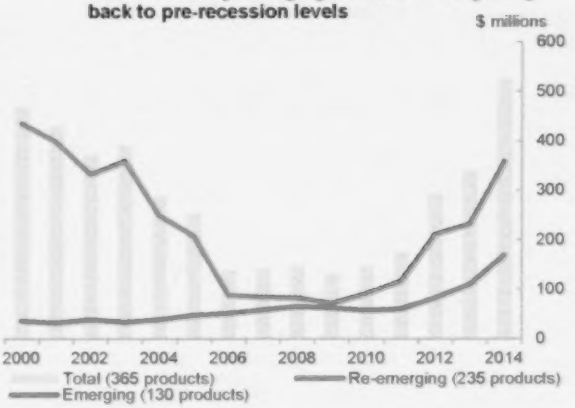
[9] We labelled export products as emerging if a period of low sales (<$2 million) was followed by a sustained surge in growth that started in 2010, 2011, 2012 or 2013.

Chart 3: **More than 300 products expanded rapidly since 2009, which had previously been in decline. Lumber and new motor vehicle designs were important to this dynamic.**



Sources: Industry Canada and Bank of Canada calculations Last observation: 2014

Chart 4: **The emerging products follow different paths: some are newly emerging and others are getting back to pre-recession levels**



Sources: Industry Canada and Bank of Canada calculations Last observation: 2014

Below, we provide a more detailed look at those export categories expected to lead the recovery and those labelled as not expected to lead the recovery, along with some more granular examples.

Leaders

As expected, the depreciation of the Canadian dollar and solid U.S. demand have supported the leaders. About half of the NEX leaders currently have upward momentum, and all but three (plastic and rubber products; commercial services; logs, pulpwood and other forestry products) have grown in line with, or outperformed, their benchmark over the past six quarters (Appendix A, and Table 2).[10] In particular, many of the export series linked to U.S. investment and industrial production have advanced, from M&E to building materials (Chart 5).

Solid growth among the leaders is part of a continuation of the trend since the Great Recession. At the granular level within the leaders categories, one can observe several products surging forward with sustained growth of 10 per cent or more annually since 2009. Building materials (lumber thickness >6 mm, coniferous wood), plastics (polymers of ethylene), aerospace (parts of airplanes or helicopters) and fabricated metal (ingots and other primary forms – stainless steel) are some examples of Canadian exports surging ahead within the broader leaders categories.

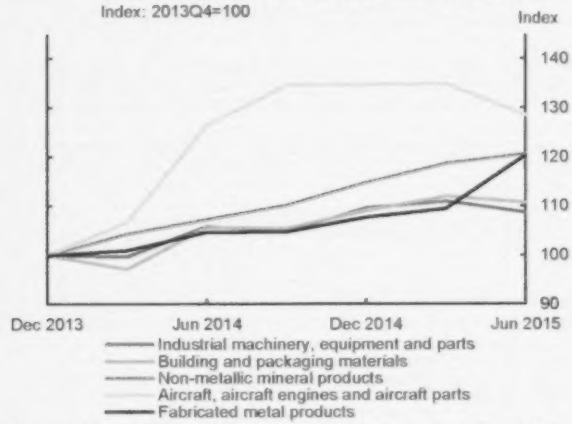
On the downside, two developments warrant attention. First, the export of commercial services, the largest NEX component, is 4 per cent below its benchmark (U.S. GDP) since 2013Q4, representing about half a percentage point on the level of NEX (Appendix A, Chart A1). While its weakness is somewhat puzzling, we expect growth to pick up meaningfully going forward, driven

[10] The performance of plastic and rubber exports relative to its benchmark can vary significantly with the point of reference (i.e., whether comparing performance since 2013Q1 or 2013Q4). This suggests that the conclusion should be taken with caution in this case.

by solid U.S. private demand and the recent Canadian-dollar depreciation.[11] Second, the decline in global commodity prices has continued. And, despite a lower Canadian dollar and strong U.S. growth in related sectors, the weaker prices have led to several mine and mill closures or temporary shutdowns. As a result, two leaders – logs, pulpwood and other forestry products, and intermediate metal products – have dragged on activity (Chart 6). The weakness in the export of intermediate metal products has resulted in more than a $5 billion drag on NEX, while exports of logs, pulpwood and other forestry products (while small in value terms) have lost about 35 per cent of their volume since late 2013. Growth for these two product categories could be stalled until a meaningful and sustained recovery in prices occurs.

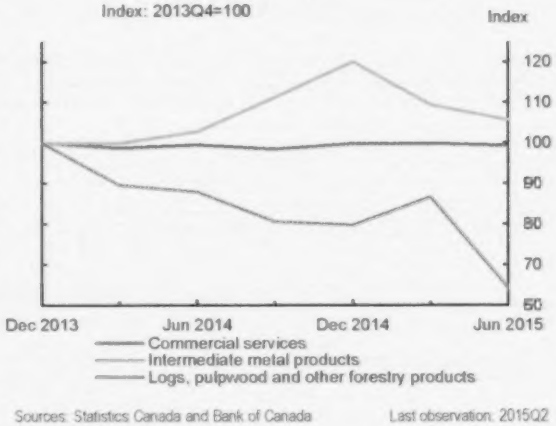
Notwithstanding these areas of weakness, the underlying strength of the leaders is clear in the data. Without these three categories – commercial services; intermediate metal products; logs, pulpwood and other forestry products – the level of the NEX leaders would be about 4 per cent higher as of 2015Q2.

Chart 5: **Export sectors linked to M&E, residential and industrial production have grown since 2013Q4**



Sources: Statistics Canada and Bank of Canada calculations. Last observation: 2015Q2

Chart 6: **Leaders categories that have fallen short of expectations**



Sources: Statistics Canada and Bank of Canada Last observation: 2015Q2

Laggards

Some NEX laggards have exceeded expectations. Some of these exports show upward momentum and only three of these products (passenger cars and light trucks; recyclable waste and scrap; food, beverage and tobacco products) are below their respective U.S. benchmarks. Indeed, depreciation of the Canadian dollar since early 2014 has provided significant support to several of

[11] Revisions to this series can be significant given the data collection process.

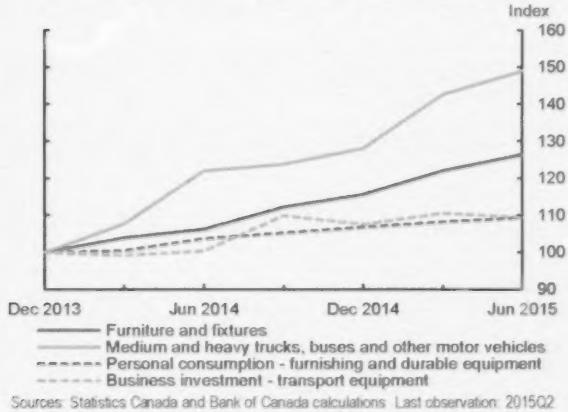
these categories that face intense global competition. Many laggards labelled as sensitive to the exchange rate have outperformed their benchmark. For example, furniture and fixtures, as well as medium and heavy trucks, buses and other motor vehicles, have picked up markedly since early 2014 and are well above their benchmark (Chart 7). Similarly, clothing, footwear and textiles, as well as paper and published products, have also advanced noticeably (Chart 8).[12]

Within the broader laggard categories, granular analysis shows some encouraging signs of resilience among Canadian exports.[13] First, several important laggards – passenger cars; clothing and textiles; consumer goods; food products – have narrowly defined product categories among the fastest growing since 2009. These include live bovine; cars with engines between 1,501 and 3,000 cc; dog and cat food; and chocolate. While some of the observed growth represents a cyclical recovery, the majority of these products posted gains that are well beyond that of the Bank's foreign activity measure.

While several laggards have exceeded expectations, headwinds faced by exporters of these products remain, such as intense global competition, falling commodity prices and the recent drought in Western Canada.

Chart 7: **Furniture and larger trucks are performing well above their U.S. benchmarks**

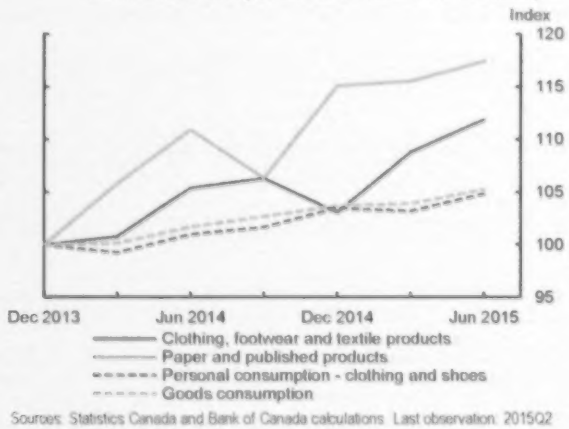
Index: 2013Q4=100 (Relative U.S. benchmarks are dashed)



Sources: Statistics Canada and Bank of Canada calculations Last observation: 2015Q2

Chart 8: **Clothing and paper products have picked up and are performing above their benchmarks**

Index: 2013Q4=100 (Relative U.S. benchmarks are dashed)



Sources: Statistics Canada and Bank of Canada calculations Last observation: 2015Q2

[12] Although these products are expanding rapidly, they remain a fraction of their previous size in the early 2000s.

[13] Our investigation identified 323 *surging* products that have grown by 10 per cent or higher during at least four of the previous five years since the Great Recession. Because very high growth is also often volatile, we allow for a year of growth below 10 per cent in a single year over the period, but remove any series that fell back in 2014 by more than 50 per cent.

III. Conclusion

Overall growth of NEX has picked up since early 2014. About 80 per cent of the 31 NEX categories have grown in line with, or outperformed, their respective U.S. benchmarks. Furthermore, about half are currently showing upward momentum. Both NEX leaders and laggards that are highly sensitive to the exchange rate were a key source of strength, as they benefited from the additional depreciation of the Canadian dollar. However, some categories' links to commodity prices have been affected by weak activity and lower prices. In addition, a more granular analysis finds that some specific export product categories are emerging or re-emerging from low levels.

References

Binette, A., D. de Munnik and É. Gouin-Bonenfant. 2014. "Canadian Non-Energy Exports: Past Performance and Future Prospects." Bank of Canada Discussion Paper No. 2014-1.

Morel, L. 2012. "A Foreign Activity Measure for Predicting Canadian Exports." Bank of Canada Discussion Paper No. 2012-1.

Table 1: Future expectations by NEX component[1]

LEADERS	LAGGARDS
More sensitive to the exchange rate	
(nominal share = 26.6%)	(nominal share = 11%)
Industrial M&E and parts	Cleaning products, appliances, misc. goods
Building and packaging material	Tires, motor vehicle engine/parts
Other electronic/electrical M&E and parts	Other transport, equip. and parts
Fabricated metals	Furniture/fixtures
Non-metallic mineral products	Clothing, footwear, textile
Plastic and rubber	Medium/heavy trucks, buses/other motor vehicles
Communications/audio/video equipment	Paper and published products
Pharmaceutical and medicinal	
Aircraft, aircraft engines and parts	
General government services	
Less sensitive to the exchange rate	
(nominal share = 27.3%)	(nominal share = 35.2%)
Computers/computer peripheral equipment	Non-metallic minerals
Commercial services	Passenger cars and light trucks
Travel services	Farms and fishing
Intermediate metal products	Pulp and paper stock
Logs, pulpwood and other forestry	Metal ores and concentrates
	Recyclable waste
	Chemicals
	Food and tobacco intermediate
	Food, beverage and tobacco products

1. Shaded series indicate positive momentum.

Table 2: Classification of non-energy export components: Past performance and future prospects

Since 2000 components that have...	Non-Energy Export Components	U.S. Benchmark[1]	Nominal Share (2014)[2]	Exchange-Rate Sensitive[3]	Likely to Lead the Recovery[4]	Showing positive momentum
... grown in line with or above their respective U.S. benchmarks	Commercial services	Gross domestic product	12.8		√	
	Passenger cars and light trucks	Motor vehicle sales	10.6			
	Intermediate metal products	Industrial production	9.8		√	
	Food, beverage and tobacco products	Goods consumption	5.5			
	Farm and fishing products	Industrial production - food, beverages and tobacco	5.4			√
	Building and packaging materials	Housing investment	4.9	√	√	√
	Aircraft, aircraft engines and aircraft parts	Industrial production - aerospace and other miscellaneous goods	4.0	√	√	
	Plastic and rubber products	Industrial production	3.2	√	√	√
	Pharmaceutical and medicinal products	Personal consumption - medical care services	1.8	√	√	
	Logs, pulpwood and other forestry products	Housing investment	0.2		√	
... under-performed compared with their respective U.S. benchmarks	Industrial machinery, equipment and parts	Investment - M&E	6.3	√	√	√
	Basic chemicals and industrial chemical products	Industrial production	4.5			
	Tires; motor vehicle engines and motor vehicle parts	Industrial production - motor vehicles	4.6	√		√
	Travel services	Personal consumption - food services and accommodation	4.1		√	√
	Other electronic and electrical machinery, equipment and parts	Business investment - other information processing equipment	3.5	√	√	
	Pulp and paper stock	Industrial production	2.8			√
	Cleaning products, appliances, and misc. goods and supplies	Goods consumption	2.2	√		√
	Metal ores and concentrates	Industrial production	2.2			
	Non-metallic minerals	Industrial production	1.8			
	Communications and audio and video equipment	Business investment - other information processing equipment	1.3	√	√	
	Food and tobacco intermediate products	Industrial production - food, beverages and tobacco	1.2			√
	Recyclable waste and scrap	Industrial production	1.2			√
	Furniture and fixtures	Personal consumption - furnishing and durable equipment	1.0	√		√
	Clothing, footwear and textile products	Personal consumption - clothing and shoes	1.0	√		√
	Fabricated metal products	Industrial production	0.9	√	√	√
	Paper and published products	Goods consumption	1.0	√		√
	Medium and heavy trucks, buses and other motor vehicles	Bus. investment - transport equipment	0.6	√		√
	Other transportation equipment and parts	Bus. investment - transport equipment	0.6	√		
	Computers and computer peripheral equipment	Business investment - computers and peripheral	0.4		√	
	Non-metallic mineral products	Industrial production	0.4	√	√	√
	General government services	Gross domestic product	0.3	√	√	√

1. We currently exploit only U.S. benchmarks. With about 25 per cent of our products shipped to non-U.S. destinations (2014), our benchmarks could be improved in the future. For two export categories (government and commercial services), we have elected to use U.S. GDP.

2. Nominal shares are of the 31 subcategories considered here.

3. If, during a period of depreciation (appreciation), the growth of a component surpasses (lags) the growth of the benchmark, we define this series to be responsive to exchange rate movements. Using this definition, if a component is responsive for at least 3 out of 4 cycles, then it is defined as sensitive to the exchange rate. The last four major exchange rate cycles are 1983-86, 1986-91, 1992-95, and 2002-07.

4. We consider each export category's recent performance, its link to the expected drivers of foreign demand (such as U.S. residential and business investment), intelligence from industry contacts, and historical sensitivity to the exchange rate to determine which export components are likely to lead the recovery.

Appendix A | NEX 31 Export Categories (monthly and quarterly, 2013Q4=100)

The charts below present the recent performance of each series relative to their U.S. benchmark. 2014 nominal shares of the non-energy export categories are in parentheses. Please note that the monthly series uses a Paasche price index and revisions as of August 2015 data, which can differ from the chained quarterly National Account series.

Chart A1: **Commercial services (12.8 - leader)**

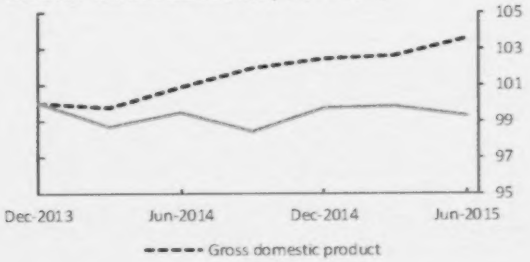


Chart A2: **Passenger cars and light trucks (10.6 - laggard)**

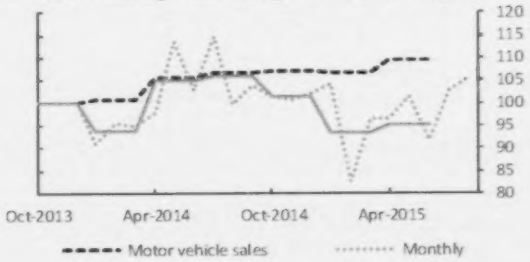


Chart A3: **Intermediate metal products (9.8 - leader)**

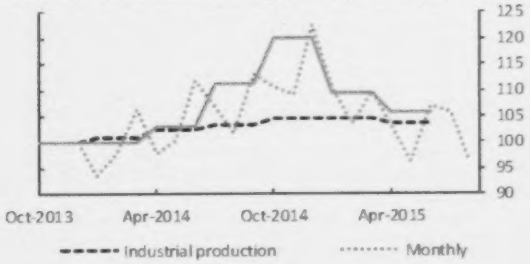


Chart A4: **Food, beverage and tobacco products (5.5 - laggard)**

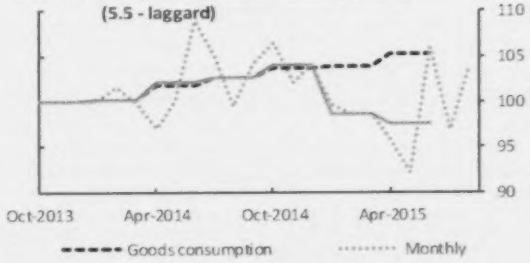


Chart A5: **Farm and fishing products (5.4 - laggard)**

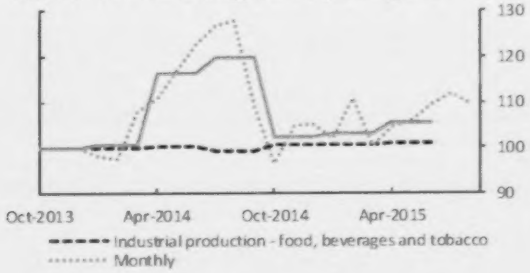


Chart A6: **Building and packaging materials (4.9 - leader)**

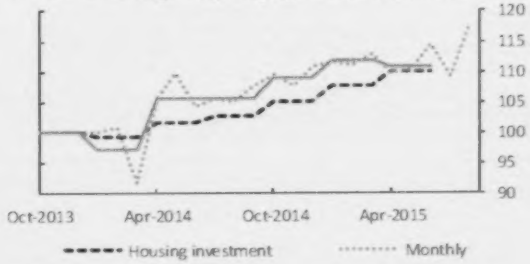


Chart A7: **Aircraft, aircraft engines and aircraft parts (4.0 - leader)**

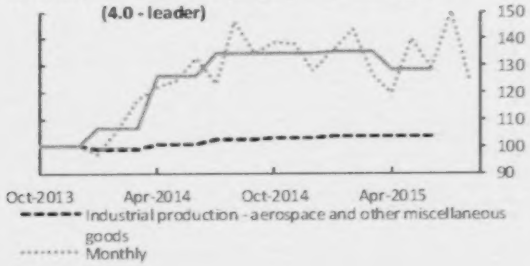


Chart A8: **Plastic and rubber products (3.2- leader)**

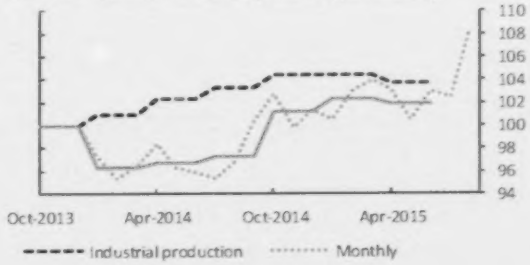


Chart A9: **Pharmaceutical and medicinal products (1.8 - leader)**

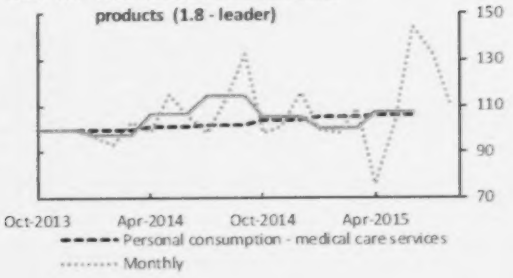


Chart A10: **Logs, pulpwood and other forestry products (0.2 - leader)**

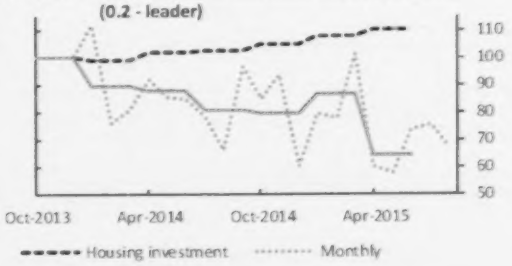


Chart A11: **Industrial machinery, equipment and parts (6.3 - leader)**

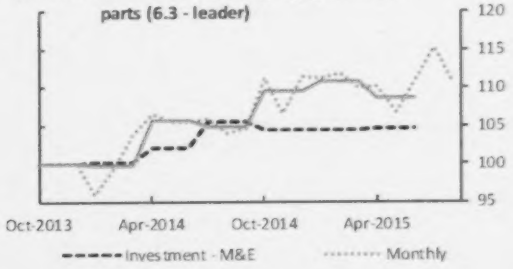


Chart A12: **Basic chemicals and industrial chemical products (4.5 - laggard)**

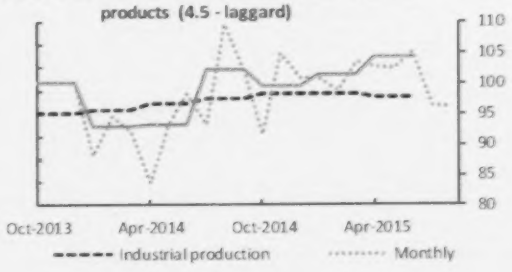


Chart A13: **Tires; motor vehicle engines and motor vehicle parts (4.6- laggard)**

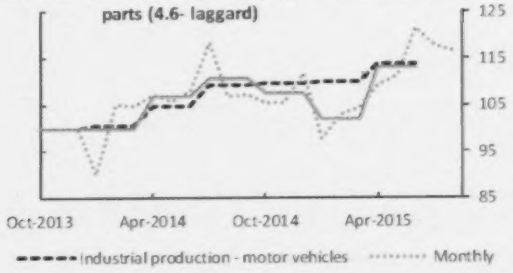


Chart A14: **Travel services (4.1 - leader)**

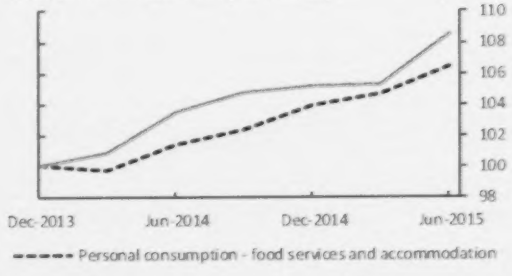


Chart A15: **Other electronic and electrical machinery, equipment and parts (3.5 - leader)**

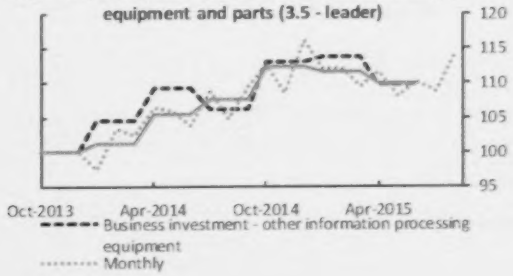


Chart A16: **Pulp and paper stock (2.8 - laggard)**

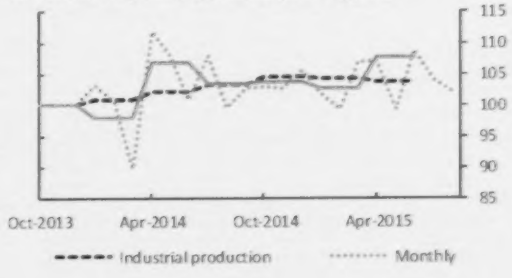


Chart A17: **Cleaning products, appliances, and misc. goods and supplies (2.2 - laggard)**

Chart A18: **Metal ores and concentrates (2.2 - laggard)**

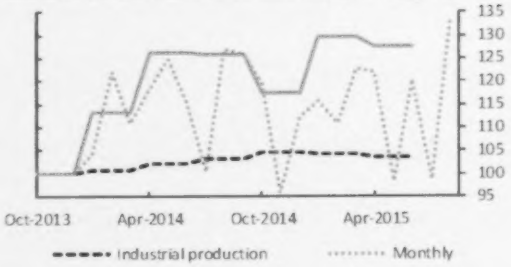


Chart A19: **Non-metallic minerals (1.8 - laggard)**

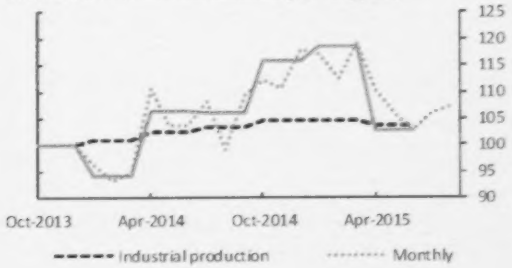


Chart A20: **Communications and audio and video equipment (1.3 - leader)**

Chart A21: **Food and tobacco intermediate products (1.2 - laggard)**

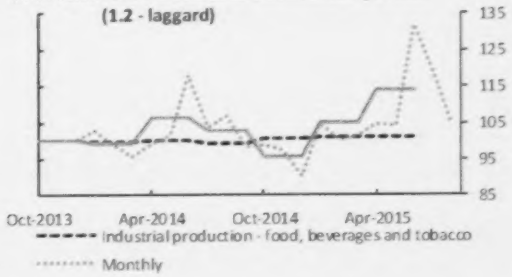


Chart A22: **Recyclable waste and scrap (1.2 - laggard)**

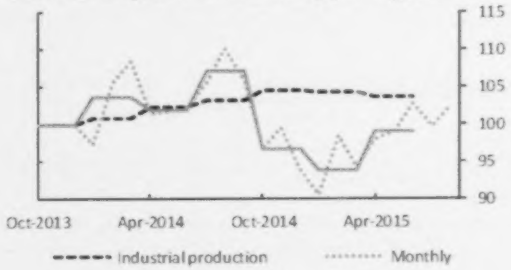


Chart A23: **Furniture and fixtures (1.0 - laggard)**

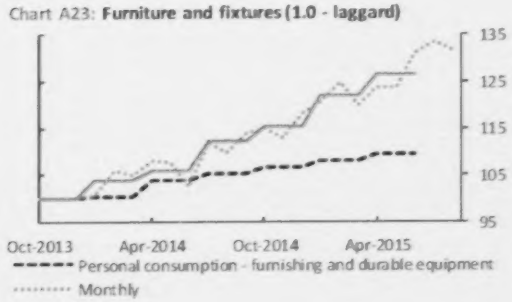


Chart A24: **Clothing, footwear and textile products (1.0 - laggard)**

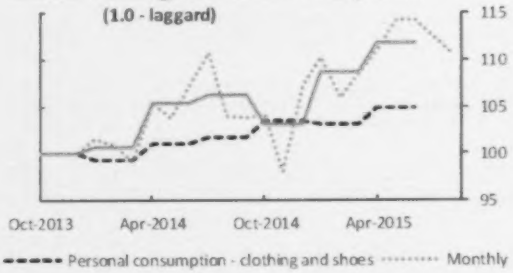


Chart A25: **Fabricated metal products (0.9 - leader)**

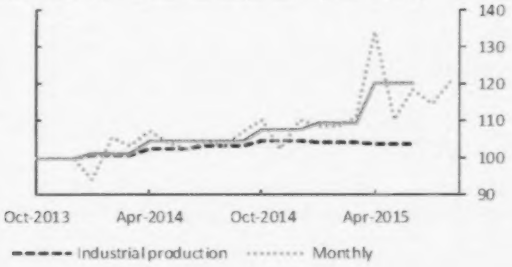


Chart A26: **Paper and published products (1.0 - laggard)**

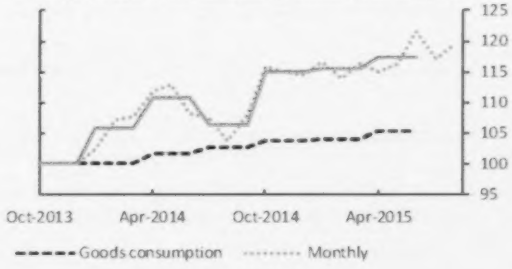


Chart A27: **Medium and heavy trucks, buses and other motor vehicles (0.6 - laggard)**

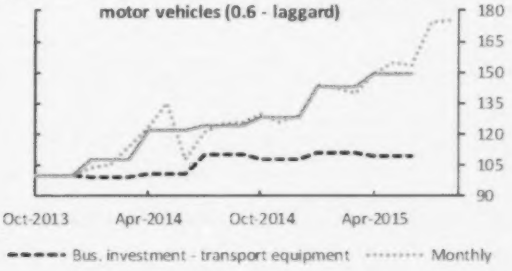


Chart A28: **Other transportation equipment and parts (0.6 - laggard)**

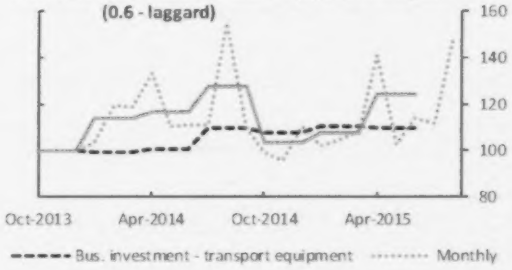


Chart A29: **Computers and computer peripheral equipment (0.4 - leader)**

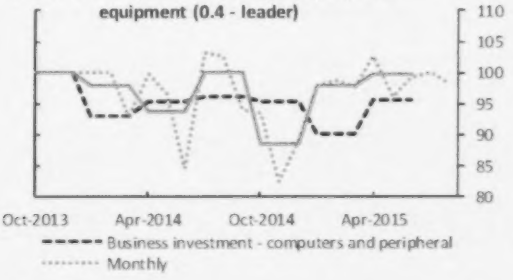


Chart A30: **Non-metallic mineral products (0.4 - leader)**

Chart A31: **General government services (0.3 - leader)**